

SUMMARY

Tank Waste Remediation Systems (TWRS) Project consists of Management Support, Work Breakdown Structure (WBS) 1.1.1.1, Performance Baseline Summary (PBS) TW10; Tank Farm Operations, WBS 1.1.2.1, PBS TW03; Tank Safety Issue Resolution, WBS 1.1.2.2, PBS TW02; Tank Waste Characterization, WBS 1.1.2.4, PBS TW01; Retrieval Project, WBS 1.1.3.1, PBS TW04; Immobilized Tank Waste Storage and Disposal, WBS 1.1.3.4, PBS TW09; Process Waste Support (WBS 1.1.3.5, PBS TW05; Privatization Phase I and II, WBS 1.1.3.6 and 1.1.3.7, PBS TW06 and TW07; and Privatization Infrastructure, WBS 1.1.3.8, PBS TW08.

Significant events occurred in the TWRS Project including the start of operations of Project W-030, "Tank Farm Ventilation Upgrades," which completes Tri-Party Agreement Milestones M-43-01 (HQ TO1-98-052), "Complete Project W-030, Tank Farm Ventilation Upgrades," and M-43-01C (HQ T01-98-053), "Begin Operation for Project W-030". This also satisfies the compliance schedule under the National Emissions Standards for Hazardous Air Pollutants (NESHAPS) Compliance Order for stacks 296-A-17 and 296-P-26. This was achieved on March 26, five days ahead of schedule.

In addition, FDH submitted the interim stabilization project plan for funding cases 1, 2, and 3 on March 31, 1998. This was a result of formal direction given to the PHMC on March 2, to prepare a recovery plan/path forward for the Saltwell Pumping Program. An additional scenario (Case 4) was then provided by the PHMC on April 8. This action is in response to Ecology's denial of Tri-Party Agreement Change Request M-41-97-01 (interim single-shell tank stabilization milestones).

The FY 1998 Multi Year Work Plan (MYWP) is not yet approved although the baseline change request (BCR TWR-98-033) transitioning the work scope is in process. The milestone statistics are based on the proposed baseline. Fiscal-year-to-date performance (EA, DOE-HQ, Field Office, and RL) shows nine milestones (70 percent) were completed on or ahead of schedule; two milestones (15 percent) were completed late; two milestones (15 percent) are overdue; and one milestone is forecast late. Details on the overdue and forecast late milestones can be found in the milestone exception report on page F:VI-1).

ACCOMPLISHMENTS

- Submitted letter reports for TWRS Integrated Safety Management System (ISMS) Gap Analysis 3 days ahead of schedule. (Planned)
- Completed design activities for 200 East/West Valve Pit Upgrades for Project W-314, "Tank Farm Upgrades," on schedule. (Planned)

Hanford Site Performance Report**Section F - Tank Waste Remediation Systems - March 1998**

- Submitted technical justification document revision, HNF-2337, Rev. 1, "High Priority Tank Sampling and Analysis Report," on March 24, seven days ahead of schedule. This completes DNFSB Commitments 93-5/008 5.5.6.1a and 93-5/009.007 5.6.3.1.g (HQ T01-98-160)
- Issued Revision C of Double Shell Tank Specification on March 6 (behind schedule) to support DNFSB Commitment 92-04/001 5.2.1a.
- Submitted validation packages on schedule for Projects W-314, "Tank Farm Upgrades," W-519, "Privatization Phase I Infrastructure," W-211, "Initial Tank Retrieval System," and W-465, "Immobilized Low-Activity Waste Interim Storage Facility." (Planned)
- Granted approval of the Justification for Continued Operation (JCO) for the Unreviewed Safety Question (USQ) related to transfer structure size assumption, which resulted in a B Plant transfer into double-shell tanks. (Unplanned)

COST PERFORMANCE (\$M)

| | BCWP | ACWP | VARIANCE |
|-------------|-------------|-------------|-----------------|
| TWRS | \$ 150.9 | \$ 137.9 | \$13.0 |

The 8.6 percent favorable cost variance results from passback credits to costs received due to rate reductions, cost savings, and efficiencies with gas probe design activities and SHMS installation. It is also due to outside contractor commitments that remain outstanding in Characterization and Project W-211, "Initial DST Retrieval System," and taking credit for equipment procurements prior to receipt.

SCHEDULE PERFORMANCE (\$M)

| | BCWP | BCWS | VARIANCE |
|-------------|-------------|-------------|-----------------|
| TWRS | \$ 150.9 | \$160.9 | (\$10.0) |

The 6.2 percent unfavorable schedule variance is due to resources being diverted to the Readiness-to-Proceed (RTP) effort, delay in sampling due to extensive dome load analysis requirements driven by the Basis for Interim Operation (BIO), and delays in Project W-314, "Tank Farm Ventilation Upgrades" master pump shutdown design activities. Other contributing factors include delays in initiating feed process system definition work, retrieval system definition work on hold pending re-evaluation of work scope, and a slow

construction start on Project W-320. Finally, Immobilized Waste BCR TWR-98-043 for the 4.5 meter canister is still pending, thus causing further delays to project studies.

ISSUES

- 1) **209E Facility Authorization Basis.** The current 209E Facility AB is incomplete.

Strategy/Status: A revised JCO was completed. A draft Safety Evaluation Report (SER) and USQ Closure was prepared and is in Tier 3 Review.

- 2) **Tank 241-SX-104.** Anomalous level readings on Tank 241-SX-104 resulted in an extensive investigation to determine if the tank is leaking.

Strategy/Status: A review of the delta level/delta pressure (DL/DP), installation of a video camera, and dry well testing is complete. Preliminary findings are that Tank 241-SX-104 is not leaking; additional analysis to be completed in April.

- 3) **Tank 241-SY-101.** This tank is exhibiting a slow rise in the surface level. Gas is most likely accumulating in or under the floating crust; current tank surface level response to mixer pump operation is not consistent with behavior assumed in safety analysis.

Strategy/Status: A USQ was declared on February 26. The path forward is proposed in BCR TWR-98-060 and the detailed plan that is in progress.

- 4) **Closure of Flammable Gas Unreviewed Safety Question (USQ).** Determination of a strategy is required to close the Flammable Gas USQ (Tri-Party Agreement Milestone M-40-09).

Strategy/Status: Options for closure of M-40-09 were agreed upon by RL and the PHMC. Potential solutions and their impacts will be presented to independent reviewers. A joint decision is expected in May 1998.

- 5) **Project W-314, Tank Farm Upgrades Notice of Construction (NOC).** The conditions determined by WDOH for the Project W-314 NOC are not in alignment with current work practices which could result in a shutdown of the project, schedule delays impacting Tri-Party Agreement milestones, and increased cost.

Strategy/Status: RL and PHMC are working with WDOH to reach agreement on clarifying language which would allow work to be done outside of containment.

- 6) **Potential Noncompliance with Tri-Party Agreement.** There is a potential noncompliance with the Tri-Party Agreement with respect to addition of waste to single shell tanks by transfer line flushing. This has stopped saltwell pumping activities until the non-compliance issue is resolved.

Strategy/Status: Saltwell pumping has been discontinued pending resolution. Discussions with RL and Ecology are in the process of being initiated.

- 7) **Interim Stabilization Path Forward.** Direction is pending on the interim stabilization path forward which could result in further delays in meeting the Tri-Party Agreement milestones M-41, as well as potential enforcement action by Ecology.

Strategy/Status: A revised project plan (Case 4) will be submitted on April 8 and be proposed to Ecology on April 20.

COST VARIANCE ANALYSIS: \$13M

WBS/PBS

Title

1.1.1.1/TW10

TWRS Management Support

Description and Cause: The \$2M (11%) favorable cost variance results primarily from the annualized passback credits due to rate reductions.

Impact: No impacts, as the positive cost variance will be utilized to fund additional emerging scope in the final six months of the fiscal year, such as computers, year 2000 migration, and work management system.

Correction Action: Estimated costs at completion are being developed to validate current costs to complete remaining planned work. Change requests (TWR-98-056, FDH FY98 emerging work scope, and TWR-98-100, year 2000 remediation) are pending for emerging scope requirements. The task order accrual will be corrected next month.

1.1.2.1/TW03

Tank Farm Operations

Description and Cause: The \$0.9M (1.7%) unfavorable cost variance is within the five percent threshold; therefore no explanation is required at this time.

Impact: None required at this time.

Corrective Action: None required at this time.

1.1.2.2/TW02

Tank Safety Issue Resolution

Description and Cause: The \$3.5M (22.3%) favorable cost variance is attributed to the following four items: 1) Gas probe design activities were planned for 16 individual tanks; however, engineering change notices are being completed by tank farm, which has created a cost savings. 2) The elimination of SHMS installation for tank 241-AP-104. 3) Allocation of resources for the Organic Safety Issue Resolution activities. Resources were level loaded; however, resource requirements will peak in August, with a decline in September. 4) Outstanding costs from Basin Office Systems for new computers to support Desktop 1998, and Fauske and Associates costs remain outstanding.

Impact: No impacts, as the positive cost variance will be utilized in the remaining months of the fiscal year.

Corrective Action: The favorable cost variance has been identified for application to the 241-SY-101 surface level rise issue (BCR TWR-98-030 Rev. 1) or for support to emerging scope in other TWRS Projects.

1.1.2.4/TW01

Tank Waste Characterization

Description and Cause: The \$4.9M (20.8%) favorable cost variance is due to computer procurements, enterprise company work (support on characterization data development and sampling), and outside contractor commitments that have not been fully utilized to date as originally planned.

Impact: No significant impacts. Funds are being reduced at midyear for realized efficiencies.

COST VARIANCE ANALYSIS: \$13M

WBS/PBS

Title

Corrective Action: Estimated costs at completion are being developed to validate current costs to complete remaining planned work. Additional resources will be required to recover the sampling schedule. The variance for contractor billings will be reduced once the contracts are fully utilized. The positive cost variance is also being considered as a source of funding to offset new scope and cost pressures for other TWRS Projects. Reprogramming of funds is addressed in BCR TWR-98-094.

1.1.3.1/TW04 Retrieval Project

Description and Cause: The \$2.8M (10.1%) favorable cost variance is due to Project W-211, "Initial DST Retrieval System," taking credit for equipment procurement prior to receipt.

Impact: No impacts at this time.

Corrective Action: The variance will be eliminated when equipment is delivered and disbursements made.

1.1.3.4/TW09 Immobilized Tank Waste

Description and Cause: The (\$0.1M) (2.5%) favorable cost variance is due to BCR TWR-98-043 for the 4.5 meter canister not being approved.

Impact: No impacts, as the unfavorable cost variance will become a favorable variance when the BCR is approved.

Corrective Action: Awaiting approval of the change request.

1.1.3.5/TW05 Process Waste Support

Description and Cause: The \$0.7M (9.2%) positive cost variance is due to efficiencies realized on the system definition support to ICD 22, "Air Emissions." Offsetting the positive cost variance is carryover work, not in the current MYWP baseline, to dispose of private contractor's sample waste from FY 1997 waste treatability studies.

Impact: No impacts; as efficiencies will be utilized to offset a portion of the costs associated with the sample waste.

Corrective Action: Change Request TWR-98-099 is in process to add the private contractor sample waste scope to the baseline.

SCHEDULE VARIANCE ANALYSIS: \$9.8M**WBS/PBS****Title****1.1.1.1/TW10 TWRS Management Support**

Description and Cause: The \$1.2M (6.2%) unfavorable schedule variance is within the negative 7.5 percent threshold. However, the schedule variance is due to assignment of personnel to the RTP, which delayed planned cost estimating and systems engineering work scope.

Impact: No impacts, as no milestones are in jeopardy. Resources are being restored in cost estimating to support Technical Baseline Requirements (TBRs).

Corrective Action: A change request will be prepared to transfer cost estimating performance and actuals from Retrieval to Management Support.

1.1.2.1/TW03 Tank Farm Operations

Description and Cause: The \$2.0M (3.7%) unfavorable schedule variance is within the threshold, therefore no explanation is required.

Impact: None required at this time.

Corrective Action: None required at this time.

1.1.2.2/TW02 Tank Safety Issue Resolution

Description and Cause: There is no schedule variance for this PBS.

Impact: None.

Corrective Action: None.

1.1.2.4/TW01 Tank Waste Characterization

Description and Cause: The \$1.4M (5.6%) unfavorable schedule variance is due to an extensive dome load analysis requirement driven by the BIO implementation, which caused core sampling to fall behind schedule. Also, there are delays in deployment of rotary mode portable exhausters.

Impact: Core sampling commitments to meet Performance Agreement TWR1.2.16 (WIRD Tri-Party Agreement milestones M-44-13B and 14B due June 30 and August 31 respectively) and TWR1.2.17 (Deliverables per FY98 WIRD Tri-Party Agreement Milestone M-44-15B due September 30) are impacted; however, schedule recovery is in progress.

Corrective Action: Improvements to the core sampling rate and management monitoring to ensure schedule recovery have been implemented. Mitigation plans have been developed and implemented, including selective use of overtime.

1.1.3.1/TW04 Retrieval Project

Description and Cause: The \$3.5M (11.3%) unfavorable schedule variance is due to the following four items: 1) Several feed process system definition tasks started late and Chromium removal work has been placed on hold, pending deletion. 2) Retrieval system definition is on hold pending development of an alternate approach to defining project requirements and a revised SST strategy. 3) Project W-151, "Tank 101-AZ Waste

SCHEDULE VARIANCE ANALYSIS: \$9.8M

WBS/PBS

Title

Retrieval System," expense work to complete a readiness assessment was delayed as resources were diverted to support other higher priority work scope; specifically Project W-030, "Tank Farm Ventilation Upgrade," ORR and the Project W-058, "Cross Site Transfer System," readiness assessment. 4) Project W-320, "Tank 241-C-106 Sluicing," variance is a result of a slow construction start in October 1997, caused by BIO implementation, and delays in December 1997, due to resources being diverted to Project W-030.

Impact: 1) Feed process has no impacts, as sufficient contingency exists and resources are being restored now that the higher priority efforts are completed. 2) No impacts to retrieval system definition work, as the replanning will make work execution more efficient than previously planned. 3) Increased risk to Project W-151, such as future designs and 241-AZ-101 samples. 4) Project W-320 has no impacts to milestones nor the critical path.

Corrective Action: 1) There is sufficient time to complete testing, as the Tank Focus Area settle decant testing was eliminated. ICD studies have started and should be completed in time to support the July finalization. A BCR is being prepared to delete the chromium removal work from the baseline. 2) A BCR is being prepared to implement the plan for a revised SST strategy and eliminate unnecessary project definition activities. 3) A BCR is being prepared. 4) The construction schedule variance is being recovered through use of overtime.

1.1.3.4/TW09 Immobilized Tank Waste

Description and Cause: The \$1.1M (21.7%) unfavorable schedule variance is due to delays in approving the directed change (TWR-98-043) to Project W-464, "Immobilized High Level Waste Interim Storage Facility," for the 4.5 meter canister; and delays in six small studies.

Impact: The negative schedule variance will increase until BCR TWR-98-043 is approved. No milestones are impacted with the six studies.

Corrective Action: Awaiting approval of BCR TWR-98-043. Schedule recovery is expected on the six studies.

1.1.3.5/TW05 Process Waste Support

Description and Cause: The \$0.4M (4.9%) unfavorable schedule variance is within the negative 7.5 percent threshold.

Impact: None required at this time.

Corrective Action: None required at this time.

MILESTONE EXCEPTION REPORT

| <u>No./WBS</u> <u>Date</u> | <u>Level</u> | <u>Milestone Title</u> | <u>Baseline Date</u> | <u>Forecast</u> |
|-------------------------------|--------------|------------------------|----------------------|-----------------|
|-------------------------------|--------------|------------------------|----------------------|-----------------|

OVERDUE - 2

| | | | | |
|-----------------------|----|--|----------|----------|
| T03-98-151 1.1.2.1 | EA | Start Interim Stabilization of Eight Single Shell Tanks (M-41-23) | 03/31/98 | 06/01/99 |
|-----------------------|----|--|----------|----------|

Cause: This milestone is in dispute resolution (BCR M-41-97-02).

Impact: M-41 interim milestones are impacted by flammable gas issues.

Corrective Action: A recovery plan is being developed and will be transmitted to Ecology by April 20, 1998.

| | | | | |
|-----------------------|----|--|----------|----------|
| T04-98-161 1.1.3.1 | EA | Initiate Sluicing Retrieval of C-106 (M-45-03A) | 10/31/97 | 11/30/98 |
|-----------------------|----|--|----------|----------|

Cause: This milestone is in dispute resolution. There are safety concerns with the receiving tank and excess steam.

Impact: Initiation of sluicing is delayed.

Corrective Action: Pollution Control Hearing Board Hearing is scheduled for June 1998. An alternate schedule was developed and activities are on schedule for November 30 completion.

FORECAST DELAY - 1

| | | | | |
|-----------------------|----|---|----------|------------|
| T03-98-152 1.1.2.1 | EA | Start Interim Stabilization of Nine Single Shell Tanks (M-41-24) | 09/30/98 | 07/05/2000 |
|-----------------------|----|---|----------|------------|

Cause: This milestone has been delayed due to flammable gas issues.

Impact: Interim stabilization will not occur as scheduled.

Corrective Action: A recovery plan is being developed and will be transmitted to Ecology by April 20.